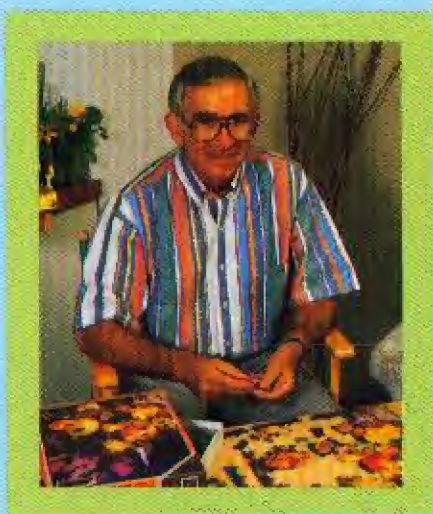


# EINSTEIN

## Meet Seymour Simon

*Since 1968, Seymour Simon has been writing children's books on science topics ranging from paper airplanes to optical illusions. More than forty of these books have been named Outstanding Science Trade Books for Children. But it wasn't until 1980 that he began writing his Einstein Anderson fiction series. In these books, Simon combines mystery, science, and "bad puns." "The reader gets a chance to solve the puzzle," Simon points out, "and, I hope, gets a chance to learn something about science as well."*

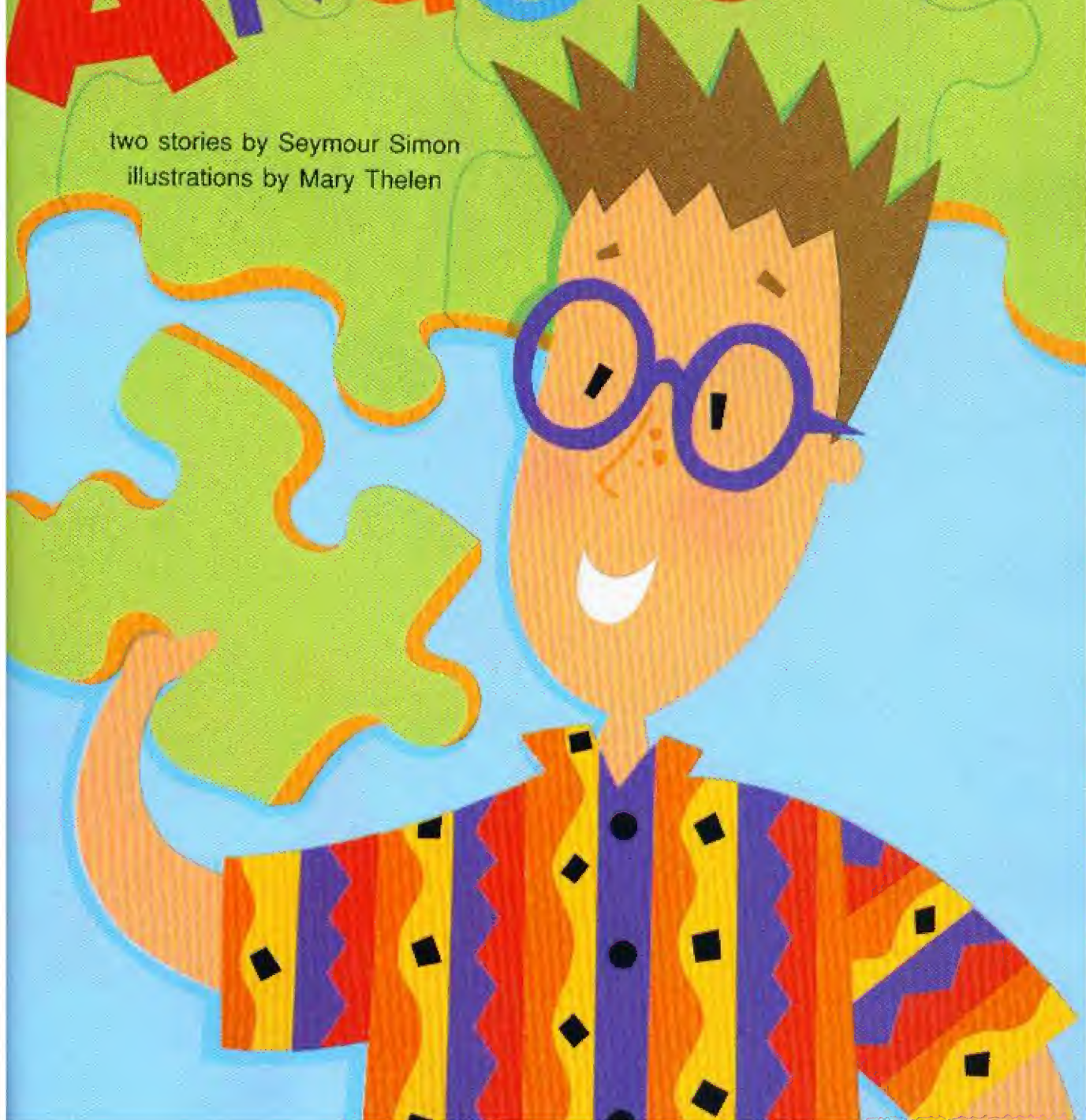
*A former science teacher, Simon still finds joy in helping students learn. He loves to hear from readers who have tried an experiment in one of his books. Sharing a reader's discovery, he says, is "as much fun as the first time I found something out for myself."*





# Anderson

two stories by Seymour Simon  
illustrations by Mary Thelen





THE

INCREDIBLE

SHRINKING

MACHINE

THE

IMPOSSIBLE



Margaret Michaels was Einstein's good friend and arch rival. Science was their favorite subject. Einstein and Margaret were always talking about important things like atoms, planets, and who was the best science student.

Margaret's mother didn't quite know what to make of her daughter. Mrs. Michaels had wanted Margaret to take ballet classes on Saturday mornings. Margaret had insisted that she wanted to be in the Saturday Science Experimenters Club.

Mrs. Michaels thought that animals were nice when they were outside of her house. Margaret thought that animals were nice both outside and inside the house. She had a pet springer spaniel named Nova, two pet cats named Orville and Wilbur, a pet gerbil named Sammy, and assorted tropical fish. She hadn't named them yet.

# SIBLE TRICK

"Children," Ms. Taylor said, "the school fair is scheduled for next Friday. There will be a used-book sale, a cookie and cake sale, and the usual kinds of booth activities, such as bobbing for apples. All the money earned from the fair will be used to help pay expenses for our school's long weekend at Big Lake State Park later this month."



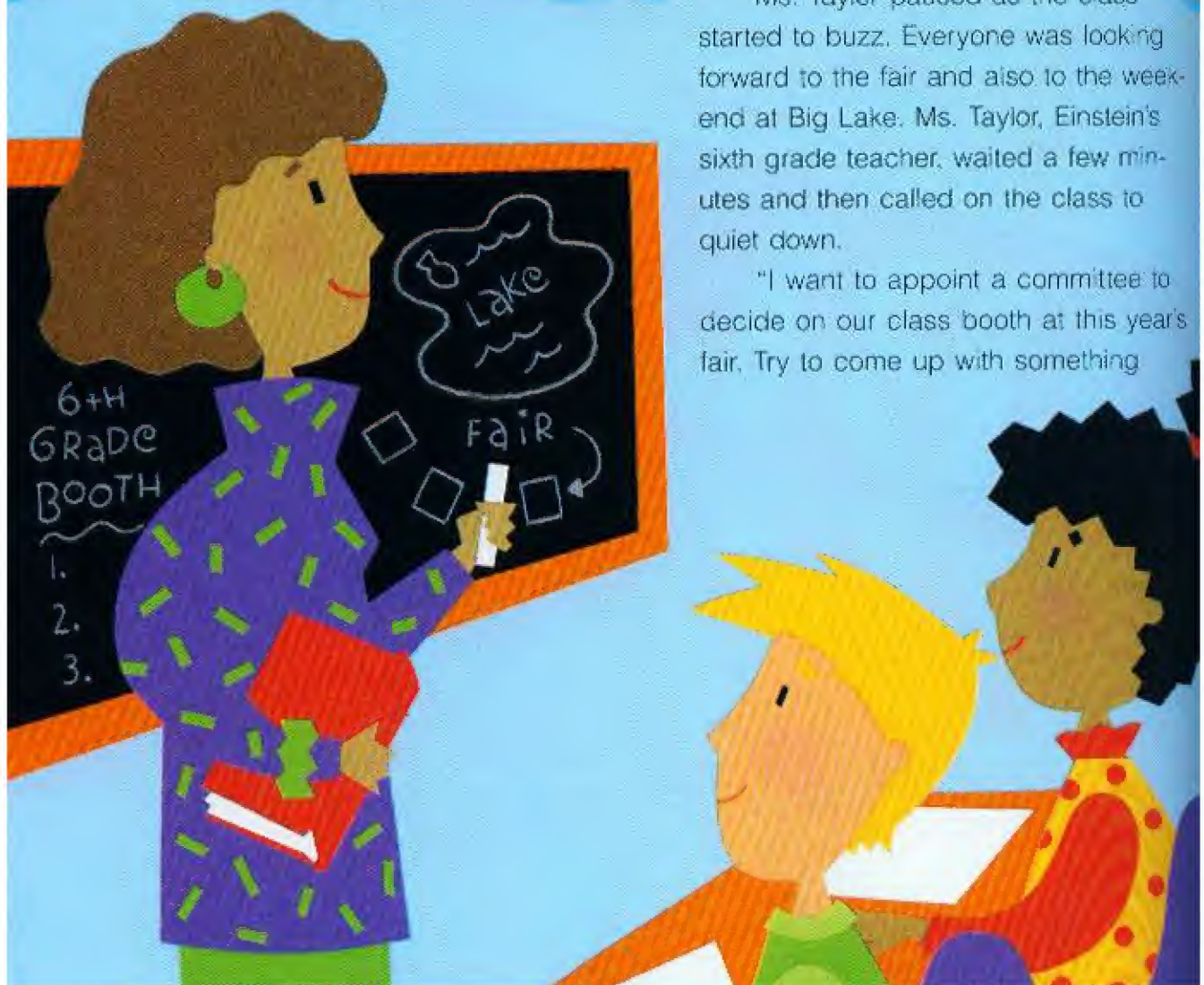
Mrs. Michaels liked to listen to classical music. Margaret liked to listen to jazz. Mrs. Michaels was a member of the Sparta Choral Singing Society. Margaret couldn't sing a note in tune. But despite all the differences between them, Mrs. Michaels was very proud of her daughter's doings and boasted about her whenever she had the chance.

Margaret had left to visit her aunt for a week as soon as school was let out for the summer. Einstein knew that Margaret was back and wondered why she hadn't called him. Finally he decided to call and find out.


"Hello, Margaret, what's happening? How is your aunt? How come you didn't call?"

Ms. Taylor paused as the class started to buzz. Everyone was looking forward to the fair and also to the weekend at Big Lake. Ms. Taylor, Einstein's sixth grade teacher, waited a few minutes and then called on the class to quiet down.

"I want to appoint a committee to decide on our class booth at this year's fair. Try to come up with something





A stylized illustration of a boy and a girl. The boy, on the left, has spiky brown hair, wears large purple-rimmed glasses, a red shirt, and a blue watch. He is gesturing with his right hand. The girl, on the right, has curly orange hair, wears a purple dress with yellow stars, and a purple bow. She is holding a black telephone receiver to her ear. The background is a light green with faint, swirling lines.

"Einstein," Margaret said,  
"I was just about to call you.  
Aunt Bess drove me home two  
days ago and stayed to visit  
my parents. She's going to drive  
back tomorrow, and she said  
it would be O.K. if I invited a  
friend to her house for the week-  
end. She's a biology professor  
at State University and has all  
kinds of science stuff at her  
house that you might like to  
see. How would you like to go?"

different. The class that earns the  
most money with its booth will go up  
to Big Lake a day early. Now who  
would like to serve on the committee?  
Hands, please."

Many children raised their hands  
to volunteer. Ms. Taylor chose six chil-  
dren, including Pat Burns and his pal  
Herman. She chose neither Einstein  
nor Margaret.



Einstein was about to refuse because his family was going to the beach on Sunday, when Margaret continued.

"Also, I have a science puzzle to show you at Aunt

Bess's that even the great Einstein Anderson can't solve."

Well, that changed everything. Einstein couldn't turn down a science challenge from Margaret, so he agreed to go. He spent the rest of the day playing



Later, during lunch recess, Margaret was talking to Einstein. "I wonder why Ms. Taylor didn't choose either of us for that committee," she said, "Does she really expect Pat the Brat or Herman to come up with an original idea?"



baseball with some classmates and wondering about the puzzle that Margaret had mentioned.

Einstein and Margaret were driven by Aunt Bess early in the morning on Saturday. They arrived at Remsen, a town near the State University, just after 8:00 A.M. Aunt Bess's house was in a sort of clearing surrounded by trees. Instead of first going

inside, Margaret led Einstein behind the house and down a twisting path in the woods.

Hidden from the house at the end of the path was a small shack with a bright yellow door. The early-morning sun shone directly on the yellow door and made it look almost like gold.

"Well, it's only fair that everyone gets a chance," Einstein replied. "And maybe Ms. Taylor thinks that scientists can't come up with a contest that's fun."

"I guess that's so," Margaret said glumly. "You haven't even cracked one joke all day long. Maybe too much science makes you lose your sense of humor."

"Lose my sense of humor!" exclaimed Einstein. "Not very likely! I'm just like the scientist who invented spaghetti. I can use my noodle to come up with an idea for a booth that will be the hit of the fair."

"Look, noodle head," Margaret said sweetly, "talk is cheap. Let's see you come up with a *science* booth that

is funny and attractive. The committee is supposed to report tomorrow on their idea for a booth. Why don't you come up with your own idea? If it's better than the committee's idea, I'm sure the class will go along with it."





Margaret unlocked the yellow door and motioned Einstein inside. Einstein noticed that the single room they entered had no other doors and only one small window. The only objects in the room were a large stone table and a small black box sitting on the table.

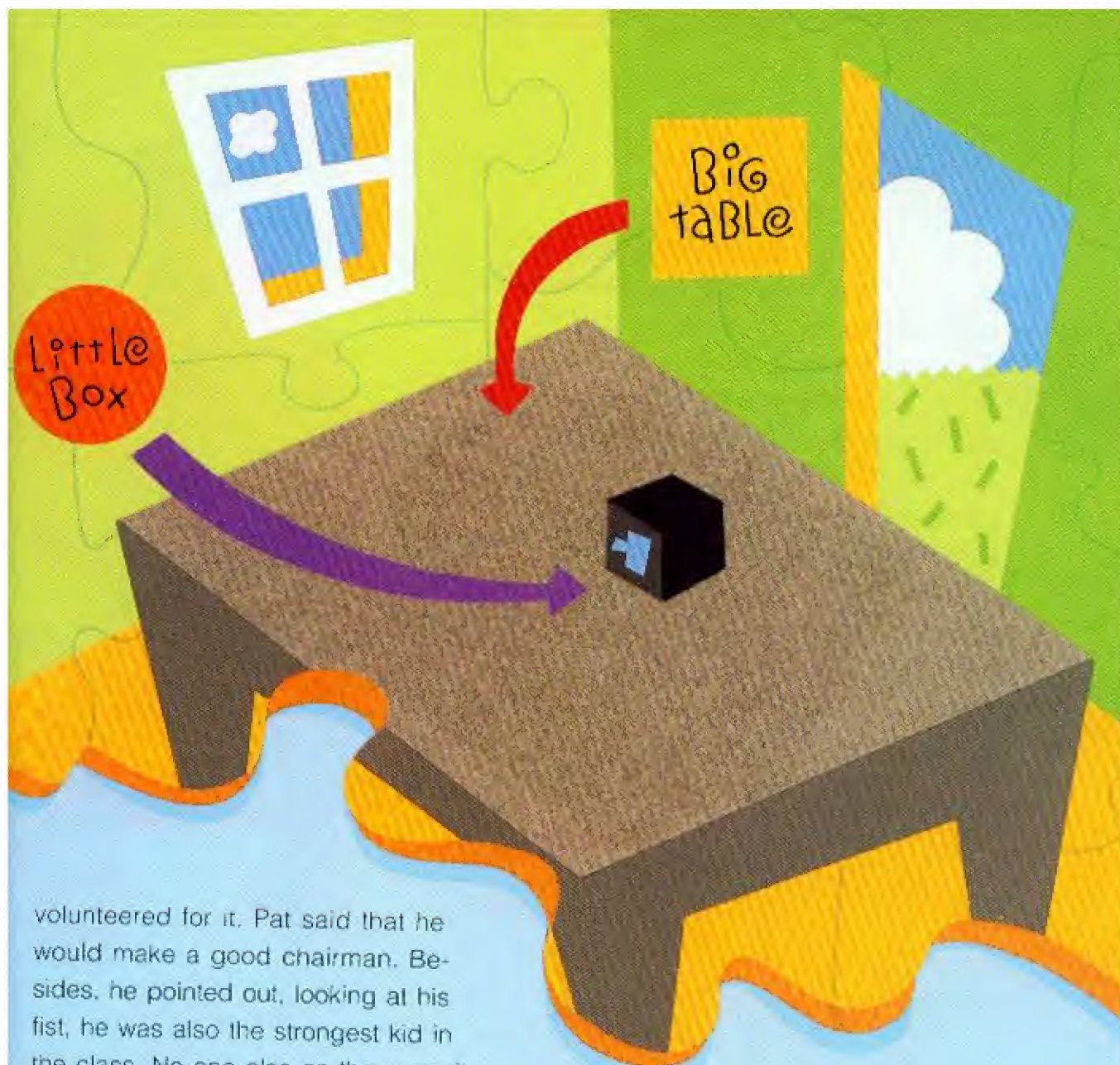
"Einstein, look over the stone table closely," Margaret said. "It was put together right in this room. You can see that it is too big to pass through the door or the window. You would have to break it into little pieces to get it out of the room."



"I accept your challenge," said Einstein. "Science can be fun. In the meantime, let's go and eat an astronaut's favorite meal. Launch."

The next day the committee was giving their ideas about a booth for their class. They had elected Pat the Brat chairman because he had





volunteered for it. Pat said that he would make a good chairman. Besides, he pointed out, looking at his fist, he was also the strongest kid in the class. No one else on the committee was prepared to argue the point.

"Here's what we decided to do," Pat reported to the class. "We're going to have a fortune-telling booth. I'm going to dress up with a turban, and we'll get a crystal ball. Then we'll charge ten cents apiece to tell people's fortunes."

"But, Pat, what do you know about telling fortunes?" Ms. Taylor asked.

"I could make them up," said Pat. "Who's going to know the difference?"

"Sure," called out Einstein. "Pat could dress up like a lady and we could call him Miss Fortune."

Pat glared at Einstein. "O.K., wise guy," he said. "You got a better idea for a booth?"

"It just so happens I have," answered Einstein. "Suppose our class has The Booth of the Impossible Trick. You have to pay a dime to try it out, and if you can do the trick you win a dollar."



Einstein checked the table carefully. He could see that what Margaret said was true. You would need a bulldozer to break up that old stone table.

"I'm now going to switch on my incredible shrinking machine," said Margaret. She flipped a switch on the side of the little black box. Nothing much happened except that the black box sort of burped once and then was quiet.

"But who's going to try to do an impossible trick?" asked Pat.

"That's the good part," said Einstein. "The trick sounds like it's easy to do, but it's really impossible. We should get lots of people who'll try to win."

"That's stupid," said Pat. "How can a trick sound easy if it's really impossible?"

"Do you want to try it?" asked Einstein.

"Do I have to pay you a dime to try?" Pat asked suspiciously.

"No, this is for free," said Einstein. "All you have to do is bend over and

touch your toes without bending your knees."

"What!" said Pat. "That's easy. I'll bet you a dime I can do that."

"There's just one more thing, Pat," Einstein said. "You have to begin with your back and your feet touching a wall. Your feet have to remain against the wall as you bend."

"So what?" said Pat. "I'm strong. I can touch my toes anywhere."

"Sorry," said Einstein, "but it can't be done."





Margaret motioned Einstein to follow her out. "We'll have to leave the room so as not to shrink ourselves," she said. "But when we come back in a few hours, the table will be gone without a trace. The incredible shrinking machine will have reduced it down to the size of an atom."





Margaret led Einstein back to Aunt Bess's house. For the rest of the day Einstein and Margaret experimented with chemical indicators such as litmus and brom thymol blue. They used a microscope to look at the protozoa in a drop of pond water. They fed food pellets to Aunt Bess's laboratory white mice. Lunch for Einstein

and Margaret was peanut butter and jelly sandwiches.

Aunt Bess started an outdoor barbecue going late in the afternoon. They had grilled hamburgers, newly picked corn, a fresh tomato salad, and watermelon for dessert. It was all delicious and they didn't finish washing and straightening up till eight o'clock.



**Can you solve the puzzle:** *How does Einstein know that Pat cannot touch his toes without bending his knees when his feet are against a wall?*


Pat stood up against the front wall of the classroom and laughed. "Can you imagine?" he said. "Einstein is telling me that I can't touch my toes. Maybe he thinks I'm as weak as he is."

Pat started to bend over, but he quickly lost his balance. "Let me try that again," he said. Again Pat bent over and nearly fell down. He tried to do it several more times and then said in disgust, "That's impossible. No one can do it."

"That's just what I told you, Pat," said Einstein. "The trick sounds easy, but it's really impossible."

"Einstein, that's really a great idea," Ms. Taylor said. "I think it will make a terrific booth at the fair. Everyone





It was twilight when Margaret led Einstein back by a different path to the shack. They arrived just as the setting sun shone directly on the yellow door, turning it golden, just as it had done in the morning.

Margaret unlocked the door and they went inside. The room looked almost the same: one door, one small window, and one small black box. But the big stone table was gone. Nothing, not even a chip of stone, remained on the floor.

At first Einstein couldn't believe his eyes. Margaret might really stump him this time. How could that big stone table just disappear? Had Margaret really invented a shrinking machine?

Margaret smiled at the look on Einstein's face. "Well," she

asked, "what do you think of my incredible shrinking machine?"

Einstein was quiet for a few minutes. Then his face changed and he began to laugh. He pushed back his glasses, which had slipped down. "You almost had me there for a minute, Margaret," he said. "I think I know what happened to the table. And if I'm correct, there is no such thing as an incredible shrinking machine."

will want to try it out. We can put the tryout place behind a curtain so that no one can see it's impossible to do."

Margaret raised her hand. "I agree with you, Ms. Taylor," she said. "It really is a great idea. Science can

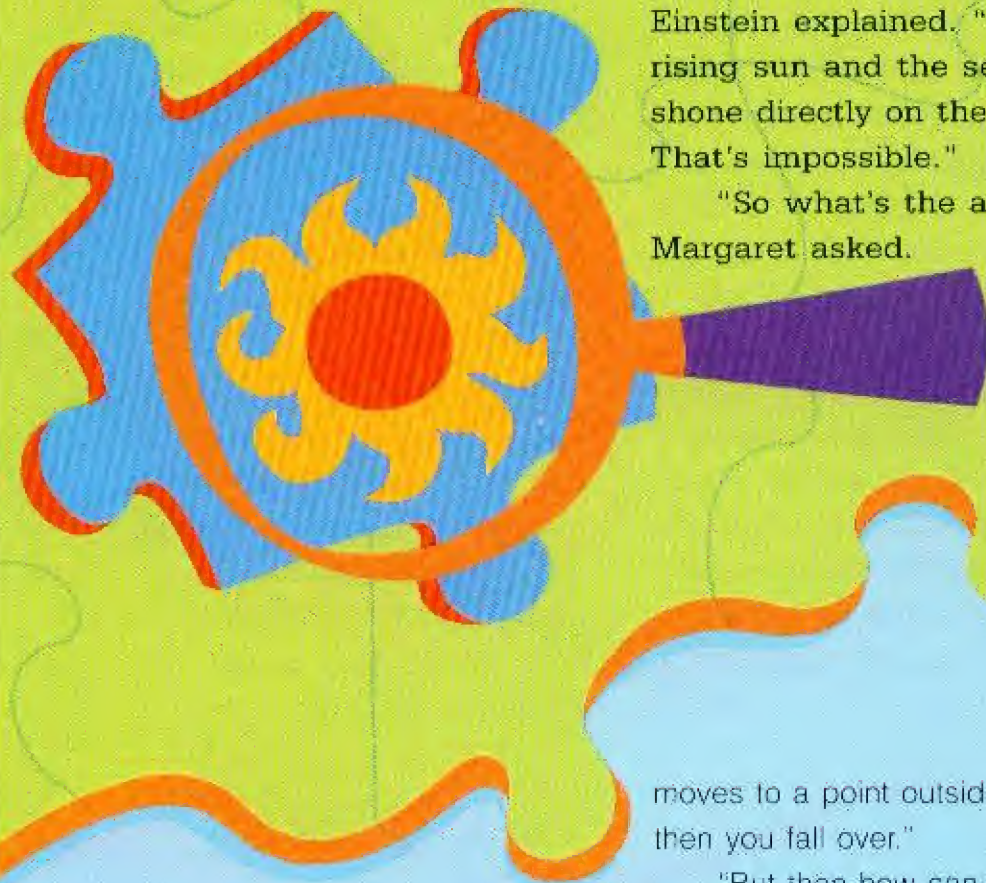
be fun. But why is the trick impossible? Can you explain it to us?"

"Certainly, Margaret," replied Ms. Taylor. "The trick is impossible because . . . er . . . Would you please explain the trick, Einstein?"



**Can you solve the puzzle:**  
*What do you think happened to the table?*

"The key to the puzzle," Einstein began his explanation, "is the sun."



"Sure," said Einstein. "It's all a matter of your center of gravity. That's the point where all your weight is concentrated. If your center of gravity is directly over your feet, then you're O.K. But if your center of gravity

"The sun!" Margaret exclaimed. "What does the sun have to do with the shrinking machine?"

"You know that the sun rises in the east in the morning and sets in the west in the evening," Einstein explained. "Yet both the rising sun and the setting sun shone directly on the yellow door. That's impossible."

"So what's the answer?" Margaret asked.

moves to a point outside your feet, then you fall over."

"But then how can you touch your toes at other times?" asked Ms. Taylor.

"Well, when you bend over freely, you shift your upper body weight forward and move your lower body weight backwards at the same time. That keeps your center of gravity from moving outside your feet. But with a wall at your back, you can't shift your



"Simple," Einstein said.

"There must be two doors and two rooms in the shack, one in back and one in front. The sun shone on one door in the morning and on the other door in the afternoon. You must have taken me into one room in the morning but into the other room in the afternoon. The first room contained the stone table. The other room didn't have anything in it."

"You're right," said Margaret.

They left the shack and started back to the house. "I see that I made one mistake," Margaret said, shaking her head.

"What's that?" Einstein asked.

"I should have shown you my incredible shrinking machine on a cloudy day."

"Right," said Einstein. "Your machine had me in the dark for a while. But it was the sun that let me see the light."

lower body weight backwards. All your weight moves forward. So you fall over when you try to touch your toes."

"That's wonderful, Einstein," Margaret said to him later. "I'm sorry I called you a noodle head yesterday."

"It did me some good," said Einstein. "As Frankenstein said when he was hit by a bolt of lightning. 'Thanks, I needed that.'"

"You certainly haven't lost your sense of humor," Margaret said. "Unfortunately!"

